

REMARKS/ARGUMENTS

Claims 1-15 are pending in this application. By this Amendment, claims 1, 4 and 15 are amended. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

A. The Office Action objects to the drawings. The Office Action asserts that the difference between the first signal and the second signal is 1/2 chip as disclosed in claim 4 and claim 15 must be shown or the feature canceled from the claim. Applicant respectfully submits Figures 3-4 disclose 1/2 chip gap between the first input signal and the second input signal.

Applicant respectfully submits that at least Figure 4 illustrate signals output by second shift register bank 33 to thirty-two despreaders of first despreaders unit 52 and second despreaders unit 53 that show 4-bit I components and 4-bit Q components. For example, among the exemplary 16-bits input signal inputted from the antenna, 8-bits (4-bits each with the I component and the Q component as shown in Figures 3 and 4) are normally inputted into the second shift register bank 33 and the remaining 8-bits (4-bits each with the I component and the Q component) are inputted into the second shift register bank 33 (e.g., through a delayer). The former 8bits (each 4 bits I/Q) are inputted into the first despreaders unit 52 and the latter 8bits (each 4 bits

I/Q) are inputted into the second desreading unit 53. Applicant respectfully submits that at least paragraphs 30 and 36 of the present specification, along with originals claims 4 and 15, describe such features. Withdrawal of the objection to the drawings is respectfully requested.

B. The Office Action objects to claim 15 for informalities. Applicant respectfully submits that that the above amendments obviate the grounds for the objection. Withdrawal of the objection to claim 15 is respectfully requested.

C. The Office Action rejects claims 1-3 and 5-14 under 35 U.S.C. §102(e) over U.S. Patent No. 6,480,529 B1 to Sih et al. (hereafter "Sih"). The rejection is respectfully traversed.

With respect to claim 1, Applicant respectfully submits that Sih fails to disclose recited features as required under §102. For example, Sih fails to disclose at least features of a first shift register bank that sequentially stores PN codes, at least one desreading means for desreading the input signals using the PN codes inputted from the first shift register bank, wherein the desreading means despreads the input signals in parallel to output desreading signals and combinations thereof as recited in claim 1.

In one embodiment according to the present invention, the first shift register bank 32 can store 32 two-bit PN codes by right-shifting two-bit PN codes received

from the PN code generator 31 according to the order of input. (See paragraphs 28 and 30 of the specification).

In contrast, Sih does not disclose a register storing the PN I/Q code generated by a PN code generator. Shift registers 400, 402 of Sih are for the input signal I/Q respectively, not PN codes in contrast to embodiments of the invention. Applicant respectfully submits that Sih does not disclose, teach or suggest features of a first shift register that sequentially stores received PN codes. That is, in Sih, a plurality of PN code generators create a plurality of PN sequences when the PN code(s) is(are) necessitated, which are directly inputted into the despreader 410 (because a register corresponding to the first shift register as recited in claim 1 does not exist in Sih). (See Figures 3 and 5, Col. 5, lines 1-3 and Col. 12, claim 9, lines 8-9 of Sih).

Further, Applicant respectfully submits that the plurality of PN code generators in Sih causes a size of the searcher system to enlarge, the cost to rise and/or the searcher operation speed to decrease because the PN code(s) is(are) generated in response to the inputted I/Q signals etc. Further, Applicant respectfully submits that Sih does not teach or suggest any modifications to its disclosure that would result in at least features of an apparatus for searching a pilot signal that includes a first shift register bank and combinations thereof as recited in claim 1.

With respect to independent claim 9, Applicant respectfully submits that Sih does not disclose, teach or suggest at least features of “storing PN codes sequentially” and combinations thereof as recited.

For at least the reasons set forth above, Applicant respectfully submits that claim 1 defines patentable subject matter. Claim 9 defines patentable subject matter for at least reasons similar to claim 1. Claims 2-3, 5-8 and 10-14 depend from claims 1 and 9, respectively, and therefore also define patentable subject matter for at least that reason as well as their additionally recited features. Withdrawal of the rejection of claims 1-3 and 5-14 under §102 is respectfully requested.

D. The Office Action rejects claims 4 and 15 under 35 U.S.C. §103(a) over Sih and U.S. Patent No. 6,154,487 to Murai et al. (hereafter "Murai"). The rejection is respectfully traversed.

As described above, Applicant respectfully submits that Murai does not disclose at least features of an apparatus for searching a pilot signal that includes a first shift register bank that sequentially stores PN codes and combinations thereof recited in claim 1 and lacking from Sih. Further, Applicant respectfully submits that Murai does not teach or suggest any modification to its disclosure that would result in at least

features of an apparatus for searching a pilot signal that includes a first shift register bank that sequentially stores PN codes and combinations thereof as recited in claim 1.

Further, Applicant respectfully submits that Murai discloses methods and apparatus that modify a spread code to improve a correlation result. See Figures 1-14 of Murai. Thus, Applicant respectfully submits that Sih and Murai, individually or in combination, would not result in at least features of an apparatus for searching a pilot signal that includes a first shift register bank that sequentially stores PN codes and combinations thereof as recited in claim 1.

For at least the reasons set forth above, Applicant respectfully submits that claim 1 defines patentable subject matter. Claim 9 defines patentable subject matter for at least reasons similar to claim 1. Claims 4 and 15 depend from claims 1 and 9, respectively, and therefore also define patentable subject matter for at least that reason as well as their additionally recited features. Withdrawal of the rejection of claims 4 and 15 under §103 is respectfully requested.

### CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

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If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Carl R. Wesolowski**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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